



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 09/903,059 Confirmation No.: 9375  
First Named Inventor: Bulucea, Constantin Filing Date: 10 July 2001  
Group Art Unit: 2814 Examiner: Farhani, D.  
Atty. Docket No.: NS-4971 US  
Title: Gate-Enhanced Junction Varactor  
Assignee(s): National Semiconductor Corporation

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**COMMISSIONER FOR PATENTS**  
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**AMENDMENT**

Sir:

Responsive to the Office Action mailed 16 September 2003, please amend the above patent application in the following manner.

**IN THE SPECIFICATION**

Amend paragraph 145 as follows:

[0145] The present gate-enhanced junction varactor can be employed in various ways in electronic circuitry, especially in integrated circuits. Fig. 17 illustrates general electronic circuitry configured in accordance with the invention for utilizing an n-channel version of the present varactor with gate-to-body bias voltage  $V_{GB}$  being maintained approximately constant during varactor operation. The electronic circuitry in Fig. 17 is connected between a source of a high supply voltage  $V_{HH}$  and a source of low supply voltage  $V_{LL}$ , typically ground. The components of the electronic circuitry consist of a general electronic circuit 230, an n-channel gate-enhanced junction varactor C1 configured according to the invention, a varactor control system 232, and an optional level shifter 234.

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